

TABLE OF CONTENTS

	<u>Page</u>
EXECUTIVE SUMMARY	ES-1
Introduction	ES-1
Alternatives Comparison	ES-6
1.0 INTRODUCTION	1-1
Summary	1-1
Scope and Methodology	1-1
Proposed Plan and Alternative to the RTP	1-3
Public Participation Process	1-4
Environmental Review Process	1-5
Organization of the PEIR	1-6
2.0 PROJECT DESCRIPTION	2-1
Background and Location	2-1
Purpose and Need for Action	2-3
Proposed Action	2-4
Mobility and Air Quality	2-19
Environmental Justice	2-21
Proposed Plan and RTP PEIR Alternatives	2-22
Relationship to Other EIRs	2-22
Intended Uses of the PEIR	2-23
3.0 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES	3.1-1
3.1 AESTHETICS AND VIEWS	3.1-1
Environmental Setting	3.1-1
Regulatory Setting	3.1-8
Methodology	3.1-9
Impacts and Mitigation Measures	3.1-10
3.2 AIR QUALITY	3.2-1
Environmental Setting	3.2-1
Regulatory Setting	3.2-14
Methodology	3.2-19
Impacts and Mitigation Measures	3.2-22
3.3 BIOLOGICAL RESOURCES	3.3-1
Environmental Setting	3.3-1
Regulatory Setting	3.3-17

	Methodology	3.3-21
	Impacts and Mitigation Measures	3.3-22
3.4	CULTURAL RESOURCES	3.4-1
	Environmental Setting	3.4-1
	Regulatory Setting	3.4-12
	Methodology	3.4-19
	Impacts and Mitigation Measures	3.4-19
3.5	ENERGY	3.5-1
	Environmental Setting	3.5-1
	Regulatory Setting	3.5-23
	Methodology	3.5-30
	Impacts and Mitigation Measures	3.5-32
3.6	GEOLOGY, SOILS AND SEISMICITY	3.6-1
	Environmental Setting	3.6-1
	Regulatory Setting	3.6-13
	Methodology	3.6-16
	Impacts and Mitigation Measures	3.6-17
3.7	HAZARDOUS MATERIALS	3.7-1
	Environmental Setting	3.7-1
	Regulatory Setting	3.7-5
	Methodology	3.7-11
	Impacts and Mitigation Measures	3.7-12
3.8	LAND USE	3.8-1
	Environmental Setting	3.8-1
	Regulatory Setting	3.8-5
	Methodology	3.8-9
	Impacts and Mitigation Measures	3.8-10
3.9	NOISE	3.9-1
	Environmental Setting	3.9-1
	Regulatory Setting	3.9-9
	Methodology	3.9-12
	Impacts and Mitigation Measures	3.9-13
3.10	OPEN SPACE	3.10-1
	Environmental Setting	3.10-1
	Regulatory Setting	
	Methodology	3.10-19
	Impacts and Mitigation Measures	3.10-20
3.11	POPULATION, EMPLOYMENT, AND HOUSING	3.11-1
	Environmental Setting	3.11-1

	Regulatory Setting	3.11-7
	Methodology	3.11-8
	Impacts and Mitigation Measures	3.11-9
3.12	PUBLIC SERVICES AND UTILITIES	3.12-1
	Environmental Setting	3.12-1
	Regulatory Setting	3.12-9
	Methodology	3.12-13
	Impacts and Mitigation Measures	3.12-14
3.13	SECURITY AND EMERGENCY PREPAREDNESS	3.13-1
	Environmental Setting	3.13-1
	Regulatory Setting	3.13-5
	Methodology	3.13-13
	Impacts and Mitigation Measures	3.13-14
3.14	TRANSPORTATION	3.14-1
	Environmental Setting	3.14-1
	Regulatory Setting	3.14-18
	Methodology	3.14-19
	Impacts and Mitigation Measures	3.14-21
3.15	WATER RESOURCES	3.15-1
	Environmental Setting	3.15-1
	Regulatory Setting	3.15-29
	Methodology	3.15-34
	Impacts and Mitigation Measures	3.15-35
4.0	COMPARISON OF ALTERNATIVES	4-1
	Preferred Plan Alternative	4-1
	No Project Alternative	4-2
	Modified 2004 Alternative	4-10
	Envision Alternative	4-19
5.0	LONG-TERM EFFECTS	5-1
	Significant Unavoidable Environmental Changes	5-1
	Significant Irreversible Impacts	5-7
	Cumulative Impacts	5-7
	Growth Inducing Impacts	5-10
6.0	REPORT AUTHORS, ORGANIZATIONS, AND PERSONS CONSULTED	6-1
7.0	GLOSSARY	7-1

8.0 MAPS

Map 2.1-1:	The SCAG Region
Map 2.1-2:	The SCAG Subregions
Map 2.1-3:	2035 High Occupancy Vehicle (HOV) Lane System
Map 2.1-4:	2035 Mixed Flow Improvements
Map 2.1-5:	2035 HOT Lanes and Toll Facilities
Map 2.1-6:	2035 Transit Corridor System
Map 2.1-7:	2035 High Speed Rail System
Map 2.1-8:	2035 Rail Improvements
Map 2.1-9:	2035 Grade Separation Projects in Los Angeles County
Map 2.1-10:	2035 Grade Separation Projects in Orange County
Map 2.1-11:	2035 Grade Separation Projects in Riverside County
Map 2.1-12:	2035 Grade Separation Projects in San Bernardino County
Map 3.1-1:	State Designated Scenic Highways and Vista Points
Map 3.2-1:	Air Quality Districts, Basins, and Monitoring Stations
Map 3.2-2:	Potentially Impacted Hospitals, Schools, and Senior Housing
Map 3.3-1:	Vegetation Communities
Map 3.3-2:	General Locations of Known Wetlands
Map 3.3-3:	Known Sighting of Endangered, Threatened, and Rare Plant and Animal Species and Special Status Natural Communities
Map 3.5-1:	Alternative Fuel Facilities
Map 3.5-2:	Electric Refueling Stations
Map 3.6-1:	Geomorphic Provinces
Map 3.6-2:	General Soil Types

Map 3.6-3:	Location of Soils with Moderate to High Erosion Potential
Map 3.6-4:	Relative Landslide Potential
Map 3.6-5:	Earthquake Faults and Probabilistic Peak Ground Acceleration
Map 3.6-6:	Areas Subject to Liquefaction
Map 3.7-1:	Existing Freight Rail System
Map 3.8-1:	Existing (2005) Land Use Patterns
Map 3.8-2:	SCAG Region City and County Boundaries
Map 3.8-3:	2005 Household Density by Census Tract
Map 3.8-4:	2005 Employment Density by Census Tract
Map 3.10-1:	Existing Open Space, Recreation, and Agricultural Lands
Map 3.10-2:	2007 General Plan Land Use Classifications
Map 3.10-3:	Generalized Ownership
Map 3.10-4:	Open Space Resources
Map 3.10-5:	Important Farmland and Grazing Land
Map 3.12-1:	Landfill Locations in the SCAG Region
Map 3.13-1:	Strategic Highway Network (STRAHNET) in the SCAG Region
Map 3.13-2:	Fire Threat in the SCAG Region
Map 3.14-1:	Existing (2003) Freeway PM Peak Period Congestion Delay
Map 3.14-2:	Existing (2007) Highway System
Map 3.14-3:	Existing (2007) Transit System
Map 3.14-4:	Major Airports in the SCAG Region
Map 3.15-1:	Major Watersheds
Map 3.15-2:	Major Surface Waters
Map 3.15-3:	Groundwater Basins

Map 3.15-4:	Imported Water Areas Serviced by State Water Project
Map 3.15-5:	Imported Water Areas Serviced by Colorado River Aqueduct
Map 3.15-6:	Metropolitan Water District Service Areas
Map 3.15-7:	Impaired Water Bodies (303(d))
Map 3.15-8:	Regional Water Quality Control Boards
Map 3.15-9:	Federally Designated Flood Hazard Zones

TECHNICAL APPENDICES

- A. Notices of Preparation and Responses Received
- B. Air Quality
 - Screening Risk Assessment of Sample Selected Projects Included in the Southern California Association of Governments' Draft 2008 Regional Transportation Plan
 - Attorney General Recommended Greenhouse Gas Mitigation Measures
 - Greenhouse Gas Calculation Methodology
- C. Biological Resources
 - California Department of Fish and Game Natural Diversity Database (CNDDDB) – Special Status Species Reported in SCAG Region
 - Special Status Communities Reported in the SCAG Region
 - Large-Scale Protected Areas in the SCAG Region
- D. Cultural Resources
 - National Register of Historic Places
 - National Historic Landmarks
 - California Points of Historical Interest
- E. Water Resources
 - Water Balance Summary for SCAG's Hydrologic Regions

LIST OF FIGURES

Figure 2.1-1:	Daily VMT With and Without Land Use Strategy	2-13
Figure 2.1-2:	Daily VHT With and Without Land Use Strategy	2-13
Figure 2.1-3:	Daily Delay With and Without Land Use Strategy	2-13

Figure 3.5-1:	Oil Supply Sources in California	3.5-3
Figure 3.5-2:	Natural Gas Supply Sources 1980-2005	3.5-5
Figure 3.5-3:	SCAG Region Percentage of Electricity Consumption by Sector	3.5-19
Figure 3.5-4:	Natural Gas Demand by Sector Southern California Gas Vs Statewide	3.5-20
Figure 3.5-5:	Residential Natural Gas Use in California	3.5-21
Figure 3.7-1:	National Hazards Materials Incidents – Causes by Mode (2003)	3.7-6
Figure 3.10-1:	"Open" and Developed Uses in Each SCAG Subregion (percentage per type)	3.10-2
Figure 3.10-2:	Generalized Ownership in Each SCAG Subregion (percentage per type)	3.10-5
Figure 3.10-3:	Natural Lands in Each SCAG Subregion (percentage per type)	3.10-7
Figure 3.10-4:	"Protected" and "Unprotected" Natural Lands in Each SCAG Subregion (percentage per category)	3.10-8
Figure 3.10-5:	Parks-to-People Ratio in Case Study Cities (parks per 1,000 people)	3.10-11
Figure 3.10-6:	Agricultural Lands in SCAG Counties and Vicinity (percentage by type)	3.10-14
Figure 3.11-1:	Residential Building Permits in SCAG Region, 2000-2006	3.11-4
Figure 3.15-1:	Average Monthly Precipitation for Selected Areas Within the SCAG Region (1960-2001)	3.15-2
Figure 3.15-2:	Hydrograph Comparison of Urbanized and Non-urbanized Land Cover	3.15-43

LIST OF TABLES

Table ES-1	RTP Goals	ES-2
Table ES-2	RTP Policies	ES-3
Table ES-3	2008 RTP Impacts. Mitigation measures and Comparison	ES-10
Table 2.1:	2035 Population, Households, and Employment in the SCAG Region	2-3
Table 2.2:	RTP Goals	2-5
Table 2.3:	RTP Policies	2-6

Table 2.4:	RTP Goals and Related Performance Measures	2-8
Table 2.5:	Performance Measures	2-9
Table 2.6:	Summary of 2008 RTP Project Types	2-20
Table 2.7:	Existing (2003) Land Miles by County	2-20
Table 2.8:	No Project Lane Miles by County	2-21
Table 2.9:	2008 RTP Lane Miles by County	2-21
Table 3.1-1:	Caltrans Scenic Highways Program - Examples of Visual Quality Intrusions	3.1-2
Table 3.1-2:	Designated State Scenic Highways in the SCAG Region	3.1-3
Table 3.1-3:	SCAG Roadways Eligible for State Scenic Highway Designation	3.1-4
Table 3.1-4:	Projects Planned on Roadways Eligible for State Scenic Highway Designation	3.1-15
Table 3.1-5:	Projects Planned on Roadways Designated as State Scenic Highways	3.1-17
Table 3.2-1:	Peak Criteria Pollutants Readings for the SCAG Region Air Basins	3.2-10
Table 3.2-2:	Existing Greenhouse Gas Emissions	3.2-13
Table 3.2-3:	Ambient Air Quality Standards	3.2-14
Table 3.2-4:	Criteria Pollutant Emissions by Nonattainment Area—2008 vs 2035 Plan (In Tons Per Day)	3.2-25
Table 3.2-5:	Criteria Pollutant Emissions by County—2008 vs 2035 Plan (In Tons Per Day)	3.2-26
Table 3.2-6:	Criteria Pollutant Emissions by Nonattainment Area —2035 No Project vs 2035 Plan (In Tons Per Day)	3.2-27
Table 3.2-7:	Criteria Pollutant Emissions by County —2035 No Project vs 2035 Plan (In Tons Per Day)	3.2-28
Table 3.2-8:	PM10 Emissions for Heavy Duty Trucks per County (Tons Per Day)	3.2-31
Table 3.2-9:	Increased Cancer Risk at Maximum Exposed Residence From Vehicle Operation By Planning Scenario and Freeway Corridor	3.2-32

Table 3.2-10:	Distances at Which Cancer Risks Drop By 50% and 90%	3.2-33
Table 3.2-11:	SCAQMD Air Quality Significance Thresholds for Construction	3.2-34
Table 3.2-12:	Final 2007 AQMP Forecast of Annual Average Train Emissions in the South Coast Air Basin (Tons/Day)	3.2-38
Table 3.2-13:	Final 2007 AQMP Forecast of Annual Average Aircraft Emissions In the South Coast Air Basin (Tons/Day)	3.2-38
Table 3.2-14:	Final 2007 AQMP Forecast of Annual Average Ship and Commercial Boat Emissions In the South Coast Air Basin (Tons/Day)	3.2-38
Table 3.2-15:	Final 2007 AQMP Forecast of Annual Average Mobile Sources (Not Including Aircraft, Rail & Ship) Emissions In the South Coast Air Basin (Tons/Day)	3.2-38
Table 3.2-16:	Final 2007 AQMP Forecast of Annual Average Stationary and Area Source Emissions In the South Coast Air Basin (Tons/Day)	3.2-39
Table 3.2-17:	2008 RTP Greenhouse Gas Emissions By County, 2008, 2020, 2035	3.2-41
Table 3.3-1:	Natural Wetlands	3.3-10
Table 3.3-2:	Characteristics of Major Coastal Rivers	3.3-13
Table 3.3-3:	Natural Communities Conservation Plans	3.3-18
Table 3.3-4:	Listed and Key Special Status Occurrence by Habitat And County	3.3-24
Table 3.3-5:	Special Status Habitat and Communities Occurring within 150 feet of a Freeway, Transit, or Freight Rail Project (Acres)	3.3-38
Table 3.3-6:	Natural Vegetation Occurring Within 0.25 miles of a Freeway, Transit or Freight Rail Project (acres)	3.3-38
Table 3.3-7:	Natural Vegetation Occurring Within 0.25 miles of a Freeway, Transit, or Freight Rail Project (acres)	3.3-47
Table 3.3-8:	Wetland Acreage Occurring Within 150 feet of a Freeway, Transit, or Freight Rail Project	3.3-52
Table 3.4-1:	Significant Fossil Localities in the SCAG Region	3.4-3
Table 3.4-2:	Archaeological Site Distribution	3.4-4

Table 3.4-3:	National Registered Places and Landmarks in the SCAG Region (Summary Table)	3.4-6
Table 3.4-4:	California Historic Landmarks in SCAG Region (Summary Table)	3.4-6
Table 3.4-5:	California Points of Historic Interest in SCAG Region (Summary Table)	3.4-7
Table 3.4-6	California Historic Landmarks (CHL) of the Spanish Period (1769-1821)	3.4-10
Table 3.4-7	California Historic Landmarks (CHL) of the Mexican Period (1822-1848)	3.4-11
Table 3.4-8:	California Historic Landmarks (CHL) of the American Period (1849 to Present)	3.4-13
Table 3.4-9	Undisturbed Areas Occurring Within 150 Feet of a Freeway, Transit, or Freight Rail Project	3.4-28
Table 3.5-1:	Southern California Edison Energy from Qualifying Facilities	3.5-10
Table 3.5-2:	Annual Transportation Energy Consumption in the SCAG Region	3.5-16
Table 3.5-3:	California Gross System Power Generation for 2006 (Gigawatt Hours)	3.5-18
Table 3.5-4:	Average Annual Electricity Usage by County	3.5-21
Table 3.5-5:	Projected SCAG Region Transportation Fuel Consumption (Thousand Gallons per Day)	3.5-33
Table 3.5-6:	Electricity and Natural Gas Consumption for 2008, 2035 No Project and 2035 w/Project	3.5-34
Table 3.5-7:	Greenhouse Gas Emission Reduction Strategy Consistency Analysis	3.5-44
Table 3.6-1:	Characterization of Major Faults in the Southern California Region	3.6-7
Table 3.6-2:	Modified Mercalli Intensity Scale	3.6-11
Table 3.6-3:	Potential Impacts of Seismic and Geologic Hazards on Regional Transportation Projects (by County)	3.6-19
Table 3.7-1:	Number of Clean-Up Sites by County	3.7-3
Table 3.7-2:	Underground Storage Tank Sites	3.7-4
Table 3.7-3 :	Hazardous Material Shipment Rates in the United States	3.7-5
Table 3.8-1:	Land Uses Affected by Major Highway, Transit, or Freight Rail Projects	

	In the 2008 RTP	3.8-15
Table 3.9-1:	Noise Land Use Compatibility Matrix	3.9-2
Table 3.9-2:	Reference Noise Levels for Various Rail Operations	3.9-6
Table 3.9-3:	Demolition and Construction Equipment Source Noise Levels	3.9-8
Table 3.9-4:	Types and Duration of Noise Produced by Proposed Projects	3.9-15
Table 3.9-5:	Sensitive Receptors within 0.25 Miles of 2008 RTP Projects and No Project Alternative Projects	3.9-18
Table 3.9-6:	RTP Projects with Potential Noise Impacts	3.9-19
Table 3.9-7:	Percentage Roadways Where Noise Levels Exceed 66dBA	3.9-29
Table 3.10-1:	“Open” and Other Land Uses by SCAG Subregion (acres)	3.10-3
Table 3.10-2:	Parks/People-Related Information for the Case Study Cities	3.10-10
Table 3.10-3:	National Recreation and Parks Association Guidelines	3.10-12
Table 3.10-4:	Estimated Farmlands and Rangelands in the SCAG Region and Vicinity (2005 acres)	3.10-13
Table 3.10-5:	Land Uses within 150-Feet of Major Highway, Transit, and Freight Rail Projects in the 2008 RTP	3.10-28
Table 3.10-6:	2008 RTP Land Use Consumption (Area in Acres)	3.10-28
Table 3.10-7:	No Project Land Use Consumption (Area in Acres)	3.10-32
Table 3.11-1:	SCAG Population and Share of U.S. and California Populations, 1900-2008	3.11-1
Table 3.11-2:	Population Growth for SCAG Counties, 1990-2008	3.11-2
Table 3.11-3:	Ethnic Composition Comparison for SCAG Counties, 2000-2004	3.11-3
Table 3.11-4:	Age Distribution of the SCAG Counties, 2000-2007	3.11-3
Table 3.11-5:	Households in the SCAG Region	3.11-4
Table 3.11-6:	Owner and Rental Vacancy Rates in the SCAG Counties, 2000 and 2005	3.11-5
Table 3.11-7:	Homeownership Rates	3.11-5

Table 3.11-8: Affordability Index (Percentage of Residents Who Can Afford to Purchase Median-Priced Home)	3.11-6
Table 3.11-9: Household Size	3.11-6
Table 3.11-10: Total Employment	3.11-7
Table 3.11-11: Unemployment Rate in the SCAG Region	3.11-7
Table 3.11-12: 2035 Population, Households, and Employment in the SCAG Region	3.11-10
Table 3.11-13: Residential and Business Land Uses within 150-Foot Radius of 2008 RTP Highway, Transit, and Freight Rail Projects	3.11-12
Table 3.12-1: Police Service Providers for Jurisdictions within SCAG Counties	3.12-2
Table 3.12-2: Fire Protection Service Providers for Jurisdictions within SCAG Counties	3.12-3
Table 3.12-3: Kindergarten through Grade 12 Enrollment and Teachers in the SCAG Region for the 2006-2007 School Year	3.12-3
Table 3.12-4: Public and Private Schools in the SCAG Region	3.12-4
Table 3.12-5: Solid Waste Disposed Of in the SCAG Region – CY 2005	3.12-4
Table 3.12-6: Permitted Active Solid Waste Landfills in the SCAG Region	3.12-5
Table 3.12-7: Diversion Rate Summary	3.12-7
Table 3.13-1: County Offices of Emergency Services	3.13-10
Table 3.13-2: Households Exposed to Wildfire Threats	3.13-20
Table 3.14-1: Parties Directly Involved in the Development of the Regional Transportation Plan	3.14-2
Table 3.14-2: Summary of Existing (2008) Daily Vehicle Miles & Percent Vehicle Hours of Travel	3.14-5
Table 3.14-3: Summary of Existing (2008) Delay and Work Trip Length	3.14-5
Table 3.14-4: Total Vehicle Fatalities (2005)	3.14-6
Table 3.14-5: Existing (2008) Travel Mode Split (% of County Total)	3.14-7
Table 3.14-6: Existing (2008) Regional Freeway Route Miles and Lane Miles	

by County	3.14-8
Table 3.14-7: Existing (2008) Regional High Occupancy Vehicle (HOV) Route Miles and Lane Miles by County	3.14-9
Table 3.14-8: Existing (2008) Regional Arterial Route Miles and Lane Miles by County	3.14-9
Table 3.14-9: Key Statistics for Major Transit Operators (2005)	3.14-10
Table 3.14-10: Existing (2005) Activity at Major Commercial Airports in the SCAG Region	3.14-16
Table 3.14-11: Daily Vehicle Miles Traveled (VMT) in 2008 and 2035 (in millions)	3.14-22
Table 3.14-12: Daily Vehicle Hours of Delay (VHT) in 2008 and 2035 (in millions)	3.14-24
Table 3.14-13: Percentage of Evening Work Trips Completed Within 45 Minutes	3.14-26
Table 3.14-14: 2008 and 2035 Regional Transportation System Accident Rates	3.14-27
Table 3.15-1: Average Total Precipitation for Selected Areas within the SCAG Region (1970-2005, in Inches)	3.15-2
Table 3.15-2: Water Agencies in the South Lahontan Hydrologic Region	3.15-4
Table 3.15-3: Major Surface Waters	3.15-14
Table 3.15-4: Factors Influencing Per Capita Water Use	3.15-16
Table 3.15-5: Groundwater Dependence in the SCAG Region	3.15-18
Table 3.15-6: Major Water Suppliers in the SCAG Region	3.15-22
Table 3.15-7: Wastewater Flow and Capacity in the SCAG Region	3.15-30
Table 3.15-8: Pollutants Associated with Transportation	3.15-37
Table 3.15-9: New Regional Lane Miles by County	3.15-38
Table 3.15-10: Impaired Water Bodies (303(d)) Occurring Within 150 Feet of a Freeway, Transit, or Freight Rail Project in the 2008 RTP	3.15-38
Table 3.15-11: Impaired Water Bodies (303(d)) Occurring Within 150 Feet of a Freeway, Transit, or Freight Rail Project in the 2008 RTP	3.15-53
Table 4-1: Characteristics of the 2004 RTP Alternatives	4-1

Table 4-2:	Criteria Emissions By County – 2035 Modified 2004 RTP vs 2035 in 2035 Plan (in Tons Per Day)	4.-12
Table 4-3:	Modified 2004 Alternative Greenhous Gas Emissions	4-14
Table 4-4:	Criteria Emissions By County – Envision vs 2035 Plan (in Tons Per Day)	4-22
Table 4-5:	Envision Alternative Greenhous Gas Emissions	4-23